

Appendix A Business Continuity Journal Scan

We chose to examine the contents of three business continuity journals (*Disaster Recovery Journal*; *Continuity Insights*; and *Contingency Planning and Management* aka: *CPM Global Assurance*) from 2002-2006 (a five year span). *DRJ* was established in print form in 1987 (electronic editions available since 1998). It has a circulation of approximately 58,000. *Continuity Insights* was established in 2003 (online since 2003) and has a circulation of approximately 30,000. *Contingency Planning and Management* was established in 1999 and was changed to *CPM Global Assurance* in 2004. *CPM* has been available online since its creation; circulation numbers are unknown. None of these journals include peer-reviewed articles. In September 2006, Henry Stewart Publications will launch a new academic journal *Business Continuity and Emergency Planning* and will include peer-reviewed briefings, articles, and case studies.

Business continuity journals are targeted at a specific audience of business continuity professionals and disaster recovery professionals within private industry. Historically, the field of business continuity focused on disaster recovery of data and was the responsibility of the information technology department within firms. In recent years, there has been a shift to business continuity planning with the recognition that all essential business functions will need to be recovered in the event of a disaster.

Journal contents were analyzed based upon a scan of the contents of each issue and a simple scoring system to identify articles as fitting one of the following: 1) advice/how to; 2) journalistic reports; 3) single case studies (with or without analyses); 4) comparative case studies (with or without analyses); 5) original research using empirical methods. We analyzed contents using this method in order to identify the amount of evidence-based reporting within each journal. We found that a majority of the articles were journalistic reports utilizing some case examples and provide advice to business continuity managers. Therefore, we limited our final analysis to those articles which contained an element of empirically based research.

Appendix B Business Journals Article Scan

The goal of this article scan was to assess the type of articles produced for a broad readership in relation to businesses and disasters. We expected that there would be very few articles written about disasters over the past five years. We found that disaster-focused articles in the most widely circulated business publications tended to be written post-disaster event with a focus on lessons learned or a particular case study. The one exception is the recent surge in articles on preparedness for pandemic.

To identify the most highly circulated business journals/magazines, we utilized the SRDS Media Solutions database to obtain circulation numbers. The search results included advertising rates and circulation numbers for the top 100 journals across private industry (including IT, human resources, and business continuity as well as general business information). We chose the top 14 domestic magazines with a weekly, monthly, or bi-monthly circulation that focus exclusively on business matters. For example, we did not include Wall Street Journal (a daily new publication) or U.S. News and World Report (not narrowly focused on business), but we have included Business Week, Forbes, and Fast Company. Below is the list of the top 14 magazines, rate of publication, and circulation numbers for domestic businesses identified through the database search.

Publication	Type	Circulation
Business Week	Weekly News Journal	998,000
Forbes	bi-weekly	900,000
Fortune	25x/year	869,000
Fast Company	10x/year	736,000
Priority Magazine	bi-monthly/small business owners	720,000
Inc.	monthly/private companies	683,000
Business 2.0	11x/year	673,000
Entrepreneur	monthly	606,900
myBusiness	bi-monthly/small business owners	551,000
Business Week Small	5x/year/small business	
Business	owners	503,100
Barrons	weekly	301,000
Conde Naste Portfolio	new weekly pub	300,000
Harvard Business Review	monthly	242,000

Next, we identified search terms and phrases that related to disaster preparedness and recovery (Crisis Management; Disaster Preparedness; Emergency Preparedness) and then utilized ABI/INFORM Global (an index with abstracts & some full-text of scholarly journal articles in business, marketing and management, 1971 – present) to search for articles on disaster preparedness and recovery from 2001-present.

Appendix C.
Business Continuity Journal Scan
CPM Global Assurance

Author	Title	Systematic, empirical study
CPM Global Assurance January 2004		
Kirvan, Paul	Is Business Continuity Ready for Six Sigma?	
Lucas, Don M Kirvan, Paul	Governance, The Conundrum Licensing - The Future of Business Continuity	
CPM Global Assurance February 2004		
Freeman, Shelley Gowen, William P	2004: A Payroll Nightmare? Business Continuity: Defense in an Age of Uncertainty	
Farwick, Dieter	Security Politics Agenda 2004	
CPM Global Assurance March 2004		
Kirvan, Paul Blythe, Bruce	Update - Basel II Capital Accord Assessing and Defusing Workplace Threats of Violence	
French, Geoffrey S	Information Assurance Needs in Industrial Control Systems	
CPM Global Assurance April 2004		
French, Geoff Krueger, Katie	Insiders and Information Technology Where Should Business Continuity Reside in Your Company?	
Lowell, Jeffrey	Case Study: Medical Response System Supports Improved Homeland Security Readiness	
CPM Global Assurance May 2004		
Picarillo, Peter	CPM 2004 Survey of Emergency Notification Systems	x
Stafford, Torin	Not All First Responders Wear a Uniform Why Aren't Disasters Preventable?	
CPM Global Assurance June 2004		
Snepp, David	Move Over 9-1-1; Here Comes 2-1-1 Service	
Smith, Margaret G	Aligning the Facility Manager with the Business Continuity Process Personal Best Practices	

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CPM Global Assurance

**CPM Global Assurance July
2004**

	2004 Benchmark Survey of Business Continuity	x
Van Kirk, Matt	From Warning to Recovery: Private/Public Crisis Response	
Gordon, Paula D	The Convergence of Contingency Planning, Emergency Management, and Homeland Security	

**CPM Global Assurance August
2004**

Kirvan, Paul	The Conventions Are Coming, The Conventions Are Coming...	
Burtles, Jim	Emergency Evacuation Plans	
Kirvan, Paul	CPM Interviews: Helen Pettet	

**CPM Global Assurance
September 2004**

Chiara, Daniel	The Business Continuity Behavior Model	
Simon, Neil	Living in the New Normal - A Different Way of Responding	
Kirvan, Paul	NFPA 1600 and Other Standards - Almost Ready for Prime Time	

**CPM Global Assurance
October 2004**

Chiara, Daniel	The Business Continuity Behavior Model - Part Two	
Kirvan, Paul	Public/Private Sector Rules of Engagement	
Haserot, Phyllis	The Next Big Thing - Succession Planning	

**CPM Global Assurance
November 2004**

Chiara, Daniel	The Business Continuity Behavior Model - Part Three	
Heald, Arian	Spyware: The Next Wave of Corporate Espionage	
	Product Test Lab - Crisis Management Software Crisis Commander	

**CPM Global Assurance
December 2004**

Quinn, Lawrence	Executive-Level Acceptance of Business Continuity: Progress is Being Made	
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Business Continuity Journal Scan
CPM Global Assurance

Gardner, Tommy Remote Backup Service Providers:
Clarifying the Value Proposition
Watts, Marty Protecting Your Building With Security
Window Film

**CPM Global Assurance
January 2005**

McCrackan, Andrew The Unexpected Benefits of Good
Business Continuity
Brewin, Bob Public- and Private-Sector Wireless
Vulnerabilities
Vanchure, Bob Selecting a Disaster Restoration
Provider

**CPM Global Assurance
February 2005**

Kirvan, Paul Tsunami Strategies
How to Contribute to the South Asia
Tsunami Relief Effort
Kirvan, Paul 10 Questions to Ask About BC/Sec/EM

**CPM Global Assurance March
2005**

Burtles, Jim Operational Governance: The Practical
Counterpart to Corporate Governance
Eaton, David Case Study: Bandag Keeps Trucks
Rolling Even if Disaster Strikes
Shimberg, David A Suppose There Was a Disaster and
Nobody Came ...

**CPM Global Assurance April
2005**

Bowman, Tom Case Study: Duke Energy Recognizes
the Value of Convergence
McArdle, Sherri Strategic Succession Planning: An
Overlooked Competitive Advantage
(Part 1)
Two Product Test Drives for April

**CPM Global Assurance May
2005**

McArdle, Sherri Strategic Succession Planning: An
Overlooked Competitive Advantage
(Part 2)
Klein, Luc Sarbanes-Oxley and Outsourcing:
Time is Running Out for Non-U.S.
Firms
Smith, Peggy; Weiss, Fred Update: Alternate Space Review
Checklist

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**CPM Global Assurance June
2005**

Kirvan, Paul	CPM 2005 WEST Highlights
French, Daren	Ensuring Internet Connectivity
Bristow, Lorin	Emergency Communications in the Utility Industry

**CPM Global Assurance July
2005**

Kirvan, Paul	Pandemics: Worse than CBRN Threats
CPM Staff	Case Study: How Jacksonville Uses Technology to Survive Hurricanes
Jacobsen, Gregg	Identity Crisis: Who Are We, and What Are We Doing?

**CPM Global Assurance August
2005**

CPM Staff	Report: Special Meeting of the European Commission Following London Attacks
CPM Staff	CPM Interviews Kelly Perdue
Arnone, Michael	DHS Reshuffles the Deck, Announces New Reorganization Plan

**CPM Global Assurance
September 2005**

Azzarello, John	Perspective: The Fourth Anniversary of September 11, 2001
CPM Staff	CPM Interviews John Copenhaver, President/CEO of DRI International Environmental Implications of Sarbanes-Oxley

**CPM Global Assurance
October 2005**

Kousky, Ken	New Orleans, Enron and 9/11: What Keeps Going Wrong and Why It Will Happen Again
CPM Staff	CPM Interviews Paul Striedl, CBCP Update: Geographical Spread of H5N1 Avian Flu

**CPM Global Assurance
November 2005**

Phillips, Lee	Searching for Homeland Security
Friedman, Matthew	The Four Most Common Security Dangers
CPM Staff	CPM Interviews - Paul Thomas, MBCP

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CPM Global Assurance

**CPM Global Assurance
December 2005**

Arnone, Michael	White, Gray and Black - Hackers Sport Many Hats
Weldon, Douglas	Key Observations Drawn from CPM 2005 EAST ACP and BCI Members Comment on Recent U.S. Hurricanes

**CPM Global Assurance
January 2006**

CPM Staff	Best Practices for Business Continuity and Crisis Communications
Slawinski, Tonya	Five Myths of Crisis Intervention: Are you getting what you're paying for?
CPM Staff	Federal Government Begins Pandemic Planning with States

**CPM Global Assurance
February 2006**

GAO	Preparedness and Response to Hurricanes Katrina and Rita Comptroller General David M. Walker discusses GAO's preliminary observations
Munsters Moisture Control	Case Study: Undoing the Damage A race against time to preserve priceless documents damaged by Katrina
Economical Janitorial and Paper Supplies, Inc.	Case Study: Supplying the Katrina Clean-up How one distributor in New Orleans overcame hardships and sanitized the city

**CPM Global Assurance March
2006**

Coombs, Timothy	CPM/Deloitte & Touche Survey Reports Encouraging BC Trends Power in Numbers Building more effective teams through training
Hyslop, Maitland	Toward Resilience in Global Assurance

**CPM Global Assurance April
2006**

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CPM Global Assurance

Striedl, Paul L
People Continuity
The Weak Link in the BCP chain

Saracco, Don
Smart Continuity Leadership
The Role of Trust

**CPM Global Assurance May
2006**

Kichline, Devin
Banzhof, Carl E
Hyslop, Maitland
Is FEMA a Disaster Itself?
Best Practices for Identifying,
Prioritizing and Remediating
Vulnerabilities
Business Continuity

**CPM Global Assurance June
2006**

Brashier, Greg
Bove, Vincent
Hyslop, Maitland
Communication Breakdown
Recovering your phone system when
disaster strikes
American Leadership Issues: Crisis
and Response
Business Resilience

**CPM Global Assurance July
2006**

Myers, James
Robert, Lawrence
Kemp, Roger L
A Global Enterprise, An Individual Risk
The importance of BC planning for
pandemic flu
The Times They Are a-Changin'
Outsourcing BC practices grows in
popularity
Homeland Security
Common-sense measures to
safeguard your community

**CPM Global Assurance August
2006**

Winskowicz, Troy
Hyslop, Maitland
The Evolution of Emergency
Notification
Information Security Voluntary,
Regulatory and Compliance
A brief comparison of the major
standards
In Search of Timely Disaster
Assistance
A look at small businesses and the
Disaster Credit Management System

Appendix D.
Household Preparedness Surveys

	Reeder 1971	Turner 1977	Turner 1977- 1979	Bourque 1988	Bourque 1990	Bourque 1994	Mileti 1989	Mileti 1990	Mileti 1992
<i>Hazard Knowledge</i>									
Attend neighborhood or block meetings about earthquakes		x	x						
Talked with friends, relatives and neighbors									x
Sought information about earthquakes in general								x	
Sought information about what to do to get ready for earthquakes from government							x		
Sought information about what to do to get ready for earthquakes from non-government sources							x		
Talked with other people about what to do to get ready for earthquakes							x		
Sought information on what to do about aftershocks								x	
Sought information from federal government							x		x
Sought information from state government							x		x
Sought information from the Association of Bay Area Governments									x
Sought/received information from county government				x	x	x	x	x	x
Sought/received information from city government				x	x	x	x	x	x
Sought/received information from private organizations								x	x
Talked with other people about earthquake prediction/warnings							x		
Found out what to do when an earthquake happens or immediately thereafter							x		
Participated in preparedness procedures at work				x	x	x			
Found out emergency plans at schools									x
Found out if I work or live in a neighborhood particularly vulnerable to earthquakes									x
Had residence inspected for earthquake resistance									x

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	Reeder 1971	Turner 1977	Turner 1977- 1979	Bourque 1988	Bourque 1990	Bourque 1994	Mileti 1989	Mileti 1990	Mileti 1992
Has any of the <i>information you have received or heard</i> ever advised you to do any of the following things to get ready for the predicted earthquake?							x		
Store food and water							x		
Learn first aid							x		
Have first aid kit available							x		
Maintain emergency supply of needed medication							x		
Develop family emergency plan							x		
If indoors, stay indoors							x		
Get under a table or desk when the earthquake occurs							x		
If outdoors, get to areas clear of anything that can fall on you							x		
Have a flashlight handy							x		
Have a portable radio available and use it when the earthquake occurs							x		
Have heavy gloves and a crescent wrench handy							x		
Turn off utilities after the earthquake							x		
Hang up phone after the earthquake							x		
Do not use the phone unless there is an injury							x		
Learn how to prevent fires							x		
Keep fire extinguisher handy							x		
Move heavy objects off high shelves							x		
Do not use vehicle unless for emergency							x		
Anchor house to its foundation							x		
Buy earthquake insurance							x		
Strap down hot water heater							x		
Protect dishes and glassware							x		
Secure heavy furniture to walls							x		
Learn where you can get more information about earthquake preparedness							x		

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Household Preparedness Surveys

	Reeder 1971	Turner 1977	Turner 1977- 1979	Bourque 1988	Bourque 1990	Bourque 1994	Mileti 1989	Mileti 1990	Mileti 1992
Form neighborhood watch groups for earthquake preparedness							x		
<i>Formal and Informal Response Plans and Agreements</i>									
Develop an emergency plan								x	x
Family plans for reunion after the quake		x	x				x		
Family plans for emergency procedures at residence (shut off gas, find dog)		x	x						
Contact neighbors or friends for information and ideas		x	x						
Set up neighbor responsibility plans for children, the elderly, etc?		x	x						
Set up neighborhood post- earthquake plans				x	x	x			
Formed a neighborhood watch group for emergency response							x		
Picked an emergency contact person outside the area									x
Engaged in other community activities to get ready for earthquakes							x		
<i>Life Safety Protection</i>									
Store water	x	x	x	x	x	x	x		x
Store canned or dehydrated food	x	x	x	x	x	x	x		x
Have a working battery operated radio	x	x	x	x	x	x	x		x
Have a first aid kit or medical supplies	x	x	x	x	x	x			x
Have a working flash light	x	x	x	x	x	x	x		x
Other supplies?... specify		x	x						
Learned first aid				x	x	x	x		x
Instruct child(ren) what to do during an earthquake		x	x	x	x	x			
Learned how to put out fires									x
Read the earthquake page in the phone book								x	
Study emergency plans at your work							x		

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	Reeder 1971	Turner 1977	Turner 1977- 1979	Bourque 1988	Bourque 1990	Bourque 1994	Mileti 1989	Mileti 1990	Mileti 1992
Study your children's school emergency plans							x		
Learned how to assist the elderly or immobile									x
Learned how to rescue trapped people									x
<i>Property Protection</i>									
Structural support or reinforcement of your home		x	x	x	x	x			x
Put wrench by gas turnoff valve									x
Bolted house to foundation									x
Rearrange contents of cupboards or storage cabinets		x	x	x	x	x			x
Added cupboard or storage cabinet latches		x	x						x
Added lips to shelves to keep things from sliding off									x
Strapped water heater				x	x	x			x
Stored hazardous materials safely									x
Secure furniture like tall bookshelves to the wall				x	x	x			
Learned how to turn off gas, electricity and water				x	x	x			
Made household items safer							x	x	
Made my dwelling structurally safer							x	x	
<i>Initiation of Recovery</i>									
Inquired about earthquake insurance		x	x						x
Bought earthquake insurance		x	x	x	x	x	x		x
<i>Emergency Coping and Restoration of Key Functions</i>									
Cancelled or delayed large purchases							x		
Cancelled or delayed investments							x		
Saved more money							x		

Appendix E.
Household Preparedness Guidance and Checklists

	ARC	NFPA: Risk Watch	FEMA: Are you ready?	ready.gov
Preparedness for All Hazards				
<i>Hazard Knowledge</i>	x		x	
Know the facts		x		
Ask what types of disasters are most likely to happen. Request information on how to prepare for each.	x		x	
Learn about your community's warning signals: what they sound like and what you should do when you hear them.	x		x	
Ask about animal care after disaster. Animals may not be allowed inside emergency shelters due to health regulations.	x			
Find out how to help elderly or disabled persons, if needed.	x		x	
Find out about the disaster plans at your workplace, your children's school or daycare center and other places where your family spends time.	x		x	
Discuss the types of disasters that are most likely to happen. Explain what to do in each case.	x	x	x	
Conduct a home hazard hunt.	x			
<i>Life Safety Protection</i>				
Ask an out-of-state friend to be your "family contact." After a disaster, it's often easier to call long distance. Other family members should call this person and tell them where they are. Everyone must know your contact's phone number.	x	x	x	
Write down all of these contact numbers and information on the family emergency contact card.	x			
Post emergency telephone numbers by phones (fire, police, ambulance, etc.).	x			
Teach children how and when to call 911 or your local Emergency Medical Services number for emergency help.	x	x		
Pick two places to meet: 1. Right outside your home in case of a sudden emergency, like a fire. 2. Outside your neighborhood in case you can't return home. Everyone must know the address and phone number.	x	x	x	
Discuss what to do in an evacuation. Plan how to take care of your pets.	x	x	x	
Plan evacuation routes.	x	x	x	
Find the safe spots in your home for each type of disaster.	x		x	
Show each family member how and when to turn off the water, gas and electricity at the main switches.	x		x	
Teach each family member how to use the fire extinguisher (ABC type), and show them where it's kept.	x		x	
Install smoke detectors on each level of your home, especially near bedrooms.	x		x	

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	ARC	NFPA: Risk Watch	FEMA: Are you ready?	ready.gov
Stock emergency supplies and assemble a Disaster Supplies Kit.	x		x	
Take a Red Cross first aid and CPR class.	x		x	
Test your smoke detectors monthly and change the batteries at least once a year.	x			
Replace stored water every three months and stored food every six months.	x			
Test and recharge your fire extinguisher(s) according to manufacturer's instructions	x			
Quiz your kids every six months so they remember what to do.	x			
Conduct fire and emergency evacuation drills.	x			
<i>Initiation of Recovery</i>				
Check if you have adequate insurance coverage.	x		x	
Disaster Supplies Checklist				
Flashlight with plenty of extra batteries	x	x	x	x
Battery-powered radio with extra batteries	x	x	x	x
First aid kit	x	x	x	x
Prescription medications in their original bottle, plus copies of the prescriptions	x	x	x	x
Eyeglasses (with a copy of the prescription)	x		x	x
Water (at least one gallon per person is recommended; more is better)	x	x	x	x
Foods that do not require refrigeration or cooking - specifics provided	x	x	x	x
Items that infants and elderly household members may require	x	x	x	x
Medical equipment and devices, such as dentures, crutches, prostheses, etc.	x	x	x	
Change of clothes for each household member	x	x	x	x
Sleeping bag or bedroll and pillow for each household member	x			x
Checkbook, cash, and credit cards	x	x	x	x
Travelers checks			x	
Map of the area	x	x		x
Toys and games (age appropriate, if evacuating)	x	x		
Identification for each family member		x		
Extra set of car keys		x		
Phone numbers posted and available		x		
Pet food and extra water for pet				x
<i>Tools and supplies</i>				
Mess kits, or paper cups, plates, and plastic utensils	x			x
Emergency preparedness manual	x			x
Battery-operated radio and extra batteries	x			
Flashlight and extra batteries	x			
Cash or traveler's checks, change	x			x
Non-electric can opener, utility knife	x	x	x	x

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	ARC	NFPA: Risk Watch	FEMA: Are you ready?	ready.gov
Fire extinguisher: small canister ABC type	X			X
Tube tent	X			
Pliers	X			
Tape	X			
Compass	X			
Matches in a waterproof container	X	X	X	X
Aluminum foil	X			
Plastic storage containers	X			
Signal flare	X	X		
Paper, pencil	X			X
Needles, thread	X			
Medicine dropper	X			X
Shut-off wrench, to turn off household gas and water	X			X
Whistle	X		X	X
Plastic sheeting	X			X
Dust mask				X
<i>Sanitation</i>				
Toilet paper, towelettes	X			X
Soap, liquid detergent	X	X		
Feminine supplies	X	X		X
Personal hygiene items	X			X
Plastic garbage bags, ties (for personal sanitation uses)	X			X
Plastic bucket with tight lid	X			
Disinfectant	X			
Household chlorine bleach	X			X
Toothbrush/toothpaste		X		
<i>Important papers</i>				
Driver's license or personal identification	X		X	
Social Security card	X		X	
Proof of residence (deed or lease)	X		X	
Insurance policies	X		X	
Birth and marriage certificates	X		X	
Stocks, bonds, and other negotiable certificates	X		X	
Wills, deeds, and copies of recent tax returns	X		X	
Inventory home possessions			X	
<i>Planning for special needs</i>				
Create a network of neighbors, relatives, friends, and coworkers to aid you in an emergency. Discuss your needs and make sure everyone knows how to operate necessary equipment.			X	
Discuss your needs with your employer.			X	
If you are mobility impaired and live or work in a high-rise building, have an escape chair.			X	
If you live in an apartment building, ask the management to mark accessible exits clearly and to make arrangements to help you leave the building.			X	

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	ARC	NFPA: Risk Watch	FEMA: Are you ready?	ready.gov
Keep specialized items ready, including extra wheelchair batteries, oxygen, catheters, medication, food for service animals, and any other items you might need.			x	
Be sure to make provisions for medications that require refrigeration.			x	
Keep a list of the type and model numbers of the medical devices you require.			x	
<i>Caring for pets</i>	x		x	
Guidelines for large animals			x	
Birds, reptiles, and pocket pets	x			
Hazards Specific				
Blackouts (households and businesses)	x			
<i>Life Safety Protection</i>				
If you have space in your refrigerator or freezer, consider filling plastic containers with water, leaving about an inch of space inside each one.	x			
Keep your car fuel tank at least half full because gas stations rely on electricity to power their pumps.	x			
Flashlight (do not use candles due to fire danger)	x			
Batteries	x			
Portable radio	x			
At least one gallon of water	x			
A small supply of food.	x			
<i>Property Protection</i>				
If you use a computer, keep files and operating systems backed up regularly. Consider buying extra batteries and a power converter if you use a laptop computer.	x			
If you have an electric garage door opener, find out where the manual release lever is located and learn how to operate it.	x			
If you have a telephone instrument or system at home or at work that requires electricity to work (such as a cordless phone or answering machine), plan for alternate communication, including having a standard telephone handset, cellular telephone, radio, or pager.	x			
Earthquake - for households and businesses				
<i>Hazard Knowledge</i>				
Consult a professional to find out additional ways you can protect your home, such as bolting the house to its foundation and other structural mitigation techniques.	x			
Know what to do when shaking begins	x		x	
Identify what to do after shaking stops	x		x	

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	ARC	NFPA: Risk Watch	FEMA: Are you ready?	ready.gov
<i>Life Safety Protection</i>				
Choose an out-of-town family contact.	x			
Inform babysitters and caregivers of your plan.	x			
Choose a safe place in every room--under a sturdy table or desk or against an inside wall where nothing can fall on you.	x			
Practice DROP, COVER AND HOLD ON at least twice a year.	x			
Teach children to DROP, COVER, AND HOLD ON!	x			
Take a first aid class from your local Red Cross chapter.				
Keep your training current.	x			
Get training in how to use a fire extinguisher from your local fire department.	x			
<i>Assemble a disaster supplies kit</i>				
First aid kit and essential medications.	x			
Canned food and can opener.	x			
At least three gallons of water per person.	x			
Protective clothing, rainwear, and bedding or sleeping bags.	x			
Battery-powered radio, flashlight, and extra batteries.	x			
Special items for infant, elderly, or disabled family members.	x			
Written instructions for how to turn off gas, electricity, and water if authorities advise you to do so. (Remember, you'll need a professional to turn natural gas service back on.)	x			
Keep essentials, such as a flashlight and sturdy shoes, by your bedside.	x			
<i>Property Protection</i>				
Repair defective electrical wiring, leaky gas lines, and inflexible utility connections. Get appropriate professional help. Do not work with gas or electrical lines yourself.			x	
Bolt down and secure to the wall studs your water heater, refrigerator, furnace, and gas appliances. If recommended by your gas company, have an automatic gas shut-off valve installed that is triggered by strong vibrations.	x		x	
Place large or heavy objects on lower shelves. Fasten shelves, mirrors, and large picture frames to walls. Brace high and top-heavy objects.	x		x	
Store bottled foods, glass, china, and other breakables on low shelves or in cabinets that fasten shut.	x		x	
Anchor overhead lighting fixtures.			x	
Be sure the residence is firmly anchored to its foundation.			x	
Install flexible pipe fittings to avoid gas or water leaks.				
Flexible fittings are more resistant to breakage.			x	

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	ARC	NFPA: Risk Watch	FEMA: Are you ready?	ready.gov
Extreme heat				
<i>Life Safety Protection and Property Protection</i>				
Install window air conditioners snugly; insulate if necessary.			X	
Check air-conditioning ducts for proper insulation.			X	
Install temporary window reflectors (for use between windows and drapes), such as aluminum foil-covered cardboard, to reflect heat back outside.			X	
Weather-strip doors and sills to keep cool air in.			X	
Cover windows that receive morning or afternoon sun with drapes, shades, awnings, or louvers. (Outdoor awnings or louvers can reduce the heat that enters a home by up to 80 percent.)			X	
Keep storm windows up all year.			X	
Fires				
<i>Hazard Knowledge</i>				
Know about flammable items			X	
Know about heating sources			X	
Know about the dangers of matches and smoking			X	
Have electrical wiring checked by an electrician			X	
Ask your local fire department to inspect your residence for safety			X	
<i>Life Safety Protection and Property Protection</i>	X			
Smoke alarms save lives. Install a smoke alarm outside each sleeping area and on each additional level of your home.	X		X	
If people sleep with doors closed, install smoke alarms inside sleeping areas, too.	X			
Use the test button to check each smoke alarm once a month. When necessary, replace batteries immediately. Replace all batteries at least once a year.	X			
Vacuum away cobwebs and dust from your smoke alarms monthly.	X			
Smoke alarms become less sensitive over time. Replace your smoke alarms every ten years.	X			
Consider having one or more working fire extinguishers in your home. Get training from the fire department in how to use them.	X		X	
Consider installing an automatic fire sprinkler system in your home.	X		X	
Determine at least two ways to escape from every room of your home.	X			
Consider escape ladders for sleeping areas on the second or third floor. Learn how to use them and store them near the window.	X			
Select a location outside your home where everyone would meet after escaping.	X			

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	ARC	NFPA: Risk Watch	FEMA: Are you ready?	ready.gov
Practice your escape plan at least twice a year.	x			
Floods (for home and business)				
<i>Hazard Knowledge</i>				
Know what to expect	x			
Know your area's flood risk--if unsure, call your local Red Cross chapter, emergency management office, or planning and zoning department.	x			
If it has been raining hard for several hours, or steadily raining for several days, be alert to the possibility of a flood.	x			
Consult with a professional for further information if damage reduction measures can be taken.	x			
Listen to local radio or TV stations for flood information.	x			
<i>Life Safety Protection</i>				
First aid kit and essential medications.	x			
Canned food and can opener.	x			
At least three gallons of water per person	x			
Protective clothing, rainwear, and bedding or sleeping bags.	x			
Battery-powered radio, flashlight, and extra batteries.	x			
Special items for infants, elderly, or disabled family members.	x			
Written instructions for how to turn off electricity, gas and water if authorities advise you to do so. (Remember, you'll need a professional to turn them back on.)	x			
Identify where you could go if told to evacuate. Choose several places . . . a friend's home in another town, a motel, or a shelter.	x			
<i>Property protection</i>				
Keep insurance policies, documents, and other valuables in a safe-deposit box.	x			
Avoid building in a floodplain unless you elevate and reinforce your home.			x	
Elevate the furnace, water heater, and electric panel if susceptible to flooding.	x		x	
Install "check valves" in sewer traps to prevent flood water from backing up into the drains of your home.			x	
Construct barriers (levees, beams, floodwalls) to stop floodwater from entering the building.			x	
Seal walls in basements with waterproofing compounds to avoid seepage.			x	
<i>Iniation of Recovery</i>				
Check to see if you have insurance that covers flooding. If not, find out how to get flood insurance.	x			

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	ARC	NFPA: Risk Watch	FEMA: Are you ready?	ready.gov
Hurricanes (for home and business)				
<i>Hazard Knowledge</i>	x			
Know what to do when a hurricane watch is issued	x			
Know what to do when a hurricane warning is issued	x			
Know what to do when a hurricane is over	x			
Listen to NOAA Weather Radio or local radio or TV stations for evacuation instructions. If advised to evacuate, do so immediately.	x			
<i>Assemble a disaster supplies kit</i>	x			
Prescription medications and medical supplies;	x			
Bedding and clothing, including sleeping bags and pillows	x			
Bottled water, battery-operated radio and extra batteries, first aid kit, flashlight	x			
Car keys and maps	x			
Documents, including driver's license, Social Security card, proof of residence, insurance policies, wills, deeds, birth and marriage certificates, tax records, etc.	x			
First aid kit and essential medications.	x			
Canned food and can opener.	x			
At least three gallons of water per person.	x			
Protective clothing, rainwear, and bedding or sleeping bags.	x			
Battery-powered radio, flashlight, and extra batteries.	x			
Special items for infants, elderly, or disabled family members.	x			
Written instructions on how to turn off electricity, gas and water if authorities advise you to do so. (Remember, you'll need a professional to turn them back on.)	x			
Keep handy the telephone numbers of these places as well as a road map of your locality. You may need to take alternative or unfamiliar routes if major roads are closed or clogged.	x			
<i>Life Safety Protection</i>				
Identify ahead of time where you could go if you are told to evacuate. Choose several places--a friend's home in another town, a motel, or a shelter.	x			
<i>Property protection</i>				
Make plans to secure your property. Permanent storm shutters offer the best protection for windows. A second option is to board up windows with 5/8" marine plywood, cut to fit and ready to install. Tape does not prevent windows from breaking.			x	
Install straps or additional clips to securely fasten your roof to the frame structure. This will reduce roof damage.			x	

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	ARC	NFPA: Risk Watch	FEMA: Are you ready?	ready.gov
Be sure trees and shrubs around your home are well trimmed.			x	
Clear loose and clogged rain gutters and downspouts.			x	
Determine how and where to secure your boat.			x	
Consider building a safe room.			x	
Install hurricane shutters or purchase precut 1/2" outdoor plywood boards for each window of your home. Install anchors for the plywood and predrill holes in the plywood so that you can put it up quickly.	x			
Make trees more wind resistant by removing diseased and damaged limbs, then strategically removing branches so that wind can blow through.	x			
Landslides (for home and business)				
<i>Hazard Knowledge</i>				
Get a ground assessment of your property.			x	
Consult an appropriate professional expert for advice on corrective measures.			x	
<i>Initiation of Recovery</i>				
Talk to your insurance agent	x			
<i>Life Safety Protection</i>				
Develop an evacuation plan	x			
Discuss landslides and debris flow with your family	x			
<i>Property Protection</i>				
Do not build near steep slopes, close to mountain edges, near drainage ways, or natural erosion valleys.			x	
Minimize home hazards by having flexible pipe fittings installed to avoid gas or water leaks, as flexible fittings are more resistant to breakage (only the gas company or professionals should install gas fittings).			x	
Thunderstorms and Lightning (for home and business)				
<i>Life Safety Protection and Property Protection</i>				
Remove dead or rotting trees and branches that could fall and cause injury or damage during a severe thunderstorm.			x	
Remember the 30/30 lightning safety rule: Go indoors if, after seeing lightning, you cannot count to 30 before hearing thunder. Stay indoors for 30 minutes after hearing the last clap of thunder.			x	
Tornado (for home and business)				
<i>Life Safety Protection</i>				
Pick a place where family members could gather if a tornado is headed your way	x			
Prepare a safe room	x		x	

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	ARC	NFPA: Risk Watch	FEMA: Are you ready?	ready.gov
Written instructions on how to turn off electricity, gas, and water if authorities advise you to do so. (Remember, you'll need a professional to turn natural gas service back on.)	x			
Stay tuned for warnings	x			
<i>Assemble a Disaster Supplies Kit</i>	x			
First aid kit and essential medications.	x			
Canned food and can opener.	x			
At least three gallons of water per person.	x			
Protective clothing, bedding, or sleeping bags.	x			
Battery-powered radio, flashlight, and extra batteries.	x			
Special items for infant, elderly, or disabled family members.	x			
Tsunami (for home and business)			x	
<i>Hazard Knowledge</i>				
Learn about tsunami risk in your area	x			
Have an engineer check your home and advise about ways to make it more resistant to tsunami water.	x			
Use NOAA weather radio to stay informed	x			
<i>Life Safety Protection</i>				
Discuss tsunami with your family	x			
Practice your evacuation route	x			
Plan an evacuation route	x			
Make a list of items to bring inside in the event of a tsunami.	x			
<i>Initiation of Recovery</i>				
Talk to your insurance agent	x			
<i>Property Protection</i>	x			
Avoid building or living in buildings within several hundred feet of the coastline.	x			
Elevate coastal homes.	x			
Follow flood preparedness precautions.	x			
Volcano (for home and business)			x	
<i>Hazard Knowledge</i>				
Learn about your community warning systems and emergency plans.	x			
Be prepared for the hazards that can accompany volcanoes such as mudflows and flash floods, landslides and rockfalls, earthquakes, ashfall and acid rain, and tsunami	x			
<i>Life Safety Protection</i>				

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	ARC	NFPA: Risk Watch	FEMA: Are you ready?	ready.gov
Make evacuation plans. If you live in a known volcanic hazard area, plan a route out and have a backup route in mind.	x			
Develop an emergency communications plan.	x			
<i>Assemble a Disaster Supplies Kit</i>	x			
Flashlight and extra batteries	x			
First aid kit and manual	x			
Emergency food and water	x			
Non-electric can opener	x			
Essential medicines	x			
Dust mask	x			
Sturdy shoes	x			
Get a pair of goggles and a throw-away breathing mask for each member of the household in case of ashfall	x			
Flashlight and extra batteries	x			
Add a pair of goggles and disposable breathing mask for each member of the family to your disaster supply kit.			x	
Wildfires (for home and business)			x	
<i>Hazard Knowledge</i>	x			
People start most wildfires . . . find out how you can promote and practice wildfire safety.	x			
Contact your local fire department, health department, or forestry office for information on fire laws. Make sure that fire vehicles can get to your home. Clearly mark all driveway entrances and display your name and address.	x			
Report hazardous conditions that could cause a wildfire.	x			
<i>Life safety</i>				
Post fire emergency telephone numbers.	x			
Teach children about fire safety. Keep matches out of their reach.	x			
Plan several escape routes away from your home by car and by foot.	x			
Install a smoke detector on each level of your home, especially near bedrooms; test monthly and change the batteries at least once each year.	x			
Teach each family member how to use the fire extinguisher (ABC type) and show them where it's kept.	x			
<i>Formal and Informal Response Plans and Agreements</i>				

Appendix E.
Household Preparedness Guidance and Checklists

	ARC	NFPA: Risk Watch	FEMA: Are you ready?	ready.gov
Talk to your neighbors about wildfire safety. Plan how the neighborhood could work together after a wildfire. Make a list of your neighbors' skills, such as medical or technical. Consider how you could help neighbors who have special needs, such as elderly or disabled persons. Make plans to take care of children who may be on their own if parents can't get home.	x			
<i>Property protection</i>				
Regularly clean roof and gutters.	x			
Inspect chimneys at least twice a year. Clean them at least once a year. Keep the dampers in good working order. Equip chimneys and stovepipes with a spark arrester that meets the requirements of National Fire Protection Association Code 211. (Contact your local fire department for exact specifications.)	x			
Use 1/2-inch mesh screen beneath porches, decks, floor areas, and the home itself. Also, screen openings to floors, roof, and attic.	x			
Keep a ladder that will reach the roof.	x			
Consider installing protective shutters or heavy fire-resistant drapes.	x			
Keep handy household items that can be used as fire tools: a rake, axe, handsaw or chainsaw, bucket, and shovel.	x			
<i>Before wildfire threatens</i>				
Design and landscape your home with wildfire safety in mind.	x			
Select materials and plants that can help contain fire rather than fuel it.	x			
Use fire resistant or non-combustible materials on the roof and exterior structure of the dwelling. Or treat wood or combustible material used in roofs, siding, decking, or trim with UL-approved fire-retardant chemicals.	x			
Plant fire-resistant shrubs and trees. For example, hardwood trees are less flammable than pine, evergreen, eucalyptus or fir trees.	x			
Create a 30-100 foot safety zone around your house	x			
Rake leaves, dead limbs, and twigs. Clear all flammable vegetation.	x			
Remove leaves and rubbish from under structures and dispose of them properly.	x			
Thin a 15-foot space between tree crowns, and remove limbs within 15 feet of the ground.	x			
Remove dead branches that extend over the roof.	x			
Prune tree branches and shrubs within 15 feet of a stovepipe or chimney outlet.	x			
Ask the power company to clear branches from powerlines.	x			

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	ARC	NFPA: Risk Watch	FEMA: Are you ready?	ready.gov
Remove vines from the walls of the home.	x			
Mow grass regularly.	x			
Clear a 10-foot area around propane tanks and the barbecue. Place a screen over the grill--use non-flammable material with mesh no coarser than one-quarter inch.	x			
Regularly dispose of newspapers and rubbish at an approved site. Follow local burning regulations.	x			
Place stove, fireplace, and grill ashes in a metal bucket, soak in water for two days, then bury the cold ashes in mineral soil.	x			
Store gasoline, oily rags, and other flammable materials in approved safety cans. Place cans in a safe location away from the base of buildings.	x			
Stack firewood at least 100 feet away and uphill from your home. Clear combustible material within 20 feet. Use only UL-approved woodburning devices.	x			
Identify and maintain an adequate outside water source such as a small pond, cistern, well, swimming pool, or hydrant.	x			
Have a garden hose that is long enough to reach any area of the home and other structures on the property.	x			
Install freeze-proof exterior water outlets on at least two sides of the home and near other structures on the property. Install additional outlets at least 50 feet from the home.	x			
Consider obtaining a portable gasoline-powered pump in case electrical power is cut off.	x			
<i>When wildfire threatens.</i>	x			
If you are warned that a wildfire is threatening your area, listen to your battery-operated radio for reports and evacuation information. Follow the instructions of local officials.	x			
Back your car into the garage or park it in an open space facing the direction of escape. Shut doors and roll up windows. Leave the key in the ignition. Close garage windows and doors, but leave them unlocked. Disconnect automatic garage door openers.	x			
Confine pets to one room. Make plans to care for your pets in case you must evacuate.	x			
Arrange temporary housing at a friend or relative's home outside the threatened area.	x			
<i>Inside your home</i>	x			
Close windows, vents, doors, venetian blinds or non-combustible window coverings, and heavy drapes. Remove lightweight curtains.	x			
Shut off gas at the meter. Turn off pilot lights.	x			
Open fireplace damper. Close fireplace screens.	x			

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	ARC	NFPA: Risk Watch	FEMA: Are you ready?	ready.gov
Move flammable furniture into the center of the home away from windows and sliding-glass doors.				
Turn on a light in each room to increase the visibility of your home in heavy smoke.	x			
<i>Outside your home</i>				
Seal attic and ground vents with pre-cut plywood or commercial seals.	x			
Turn off propane tanks.	x			
Place combustible patio furniture inside.	x			
Connect the garden hose to outside taps.	x			
Set up the portable gasoline-powered pump.	x			
Place lawn sprinklers on the roof and near above-ground fuel tanks. Wet the roof.	x			
Wet or remove shrubs within 15 feet of the home.	x			
Gather fire tools.	x			
<i>Life Safety Protection</i>				
Meet with your family	x			
Discuss the types of disasters that could occur.	x			
Explain how to prepare and respond to each type of disaster.				
Discuss where to go and what to bring if advised to evacuate.	x			
Practice what you have discussed.	x			
Plan how your family will stay in contact if separated during a disaster	x			
Pick two meeting places	x			
1. A place a safe distance from your home in case of a home fire.	x			
2. A place outside your neighborhood in case you can't return home.	x			
Choose an out-of-state friend as a "check-in contact" for everyone to call.	x			
Post emergency telephone numbers by every phone.	x			
Show responsible family members how and when to shut off water, gas, and electricity at main switches.	x			
Contact your local fire department to learn about home fire hazards.	x			
Learn first aid and CPR. Contact your local American Red Cross chapter for information and training.	x			
<i>Assemble a Disaster Supplies Kit</i>				
A three-day supply of water (one gallon per person per day) and food that won't spoil.	x			
One change of clothing and footwear per person and one blanket or sleeping bag per person.	x			
A first aid kit that includes your family's prescription medications.	x			

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Household Preparedness Guidance and Checklists

	ARC	NFPA: Risk Watch	FEMA: Are you ready?	ready.gov
Emergency tools including a battery-powered radio, flashlight, and plenty of extra batteries.	x			
An extra set of car keys and a credit card, cash, or traveler's checks.	x			
Sanitation supplies.	x			
Special items for infant, elderly or disabled family members.	x			
An extra pair of eyeglasses.				
Keep important family documents in a waterproof container. Assemble a smaller version of your kit to keep in the trunk of your car.	x			
Winter Storms (for home and business)			x	
<i>Hazard Knowledge</i>				
Stay tuned for storm warnings	x			
Know what winter storm watches and warnings means	x			
Know what to do in a watch and a warning	x			
<i>Life Safety Protection</i>				
Ensure that each member of your household has a warm coat, gloves or mittens, hat, and water-resistant boots.	x		x	
<i>Assemble a Disaster Supplies Kit</i>	x			
First aid kit and essential medications.	x			
Battery-powered NOAA Weather radio, flashlight, and extra batteries.	x			
Canned food and can opener.	x			
Bottled water (at least one gallon of water per person per day to last at least 3 days).	x			
Extra warm clothing, including boots, mittens, and a hat.	x			
Have extra blankets on hand.	x			
Assemble a Disaster Supplies Kit for your car, too.	x			
Have your car winterized before winter storm season.	x		x	
Use rock salt to melt ice on walkways			x	
Use sand to improve traction			x	
Have snow shovels and other snow removal equipment.			x	
Technological Hazards (for home and business)				
Hazardous Materials Incidents			x	
<i>Hazard Knowledge</i>				
Be aware of hazardous materials in your community			x	
<i>Assemble a Disaster Supplies Kit</i>			x	
Plastic sheeting.			x	
Duct tape.			x	
Scissors.			x	
Household Chemical Emergencies			x	

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	ARC	NFPA: Risk Watch	FEMA: Are you ready?	ready.gov
<i>Hazard Knowledge</i>				
Be aware of potential hazards	X		X	
Buy and store safely/dispose chemicals safely	X		X	
Take precautions to prevent an emergency	X		X	
Learn to recognize the symptoms of toxic poisoning	X		X	
Be prepared to call for medical assistance	X		X	
Post the number for national poison control	X		S	
Nuclear Power Accidents				
<i>Hazard Knowledge</i>				
Know the terms			X	
Obtain public emergency information materials from the power company that operates your local nuclear power plant or your local emergency services office.			X	
<i>Life Safety Protection</i>				
In the event of a nuclear release, minimize exposure			X	
Terrorism (for home and business)				
<i>Life Safety Protection</i>				
Be aware of your surroundings.			X	
Move or leave if you feel uncomfortable or if something does not seem right.			X	
Take precautions when traveling. Be aware of conspicuous or unusual behavior. Do not accept packages from strangers. Do not leave luggage unattended. You should promptly report unusual behavior, suspicious or unattended packages, and strange devices to the police or security personnel.			X	
Learn where emergency exits are located in buildings you frequent. Plan how to get out in the event of an emergency.			X	
Be prepared to do without services you normally depend on—electricity, telephone, natural gas, gasoline pumps, cash registers, ATMs, and Internet transactions.			X	
Check on the emergency plan for any school aged children you might have	X			
Establish a meeting place	X			
Learn some basic first aid	X			
Create an emergency communications plan	X			
<i>Assemble a Disaster Supplies Kit</i>				
Work with building owners to ensure the following items are located on each floor of the building:			X	
Portable, battery-operated radio and extra batteries.			X	
Several flashlights and extra batteries.			X	
First aid kit and manual.			X	
Hard hats and dust masks.			X	
Fluorescent tape to rope off dangerous areas			X	

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	ARC	NFPA: Risk Watch	FEMA: Are you ready?	ready.gov
Biological Threats			X	
<i>Life Safety Protection</i>				
Check with your doctor to ensure all required or suggested immunizations are up to date. Children and older adults are particularly vulnerable to biological agents.			X	
Consider installing a High Efficiency Particulate Air (HEPA) filter in your furnace return duct. These filters remove particles in the 0.3 to 10 micron range and will filter out most biological agents that may enter your house. If you do not have a central heating or cooling system, a stand-alone portable HEPA filter can be used.			X	
Chemical Threats			X	
<i>Life Safety Protection</i>				
Choose an internal room to shelter, preferably one without windows and on the highest level.			X	
<i>Assemble a Disaster Supplies Kit</i>				
A roll of duct tape and scissors.			X	
Plastic for doors, windows, and vents for the room in which you will shelter in place. To save critical time during an emergency, pre-measure and cut the plastic sheeting for each opening.			X	
Nuclear Blasts			X	
<i>Hazard Knowledge</i>				
Find out from officials if any public buildings in your community have been designated as fallout shelters. If none have been designated, make your own list of potential shelters near your home, workplace, and school. These places would include basements or the windowless center area of middle floors in high-rise buildings, as well as subways and tunnels.			X	
If you live in an apartment building or high-rise, talk to the manager about the safest place in the building for sheltering and about providing for building occupants until it is safe to go out.			X	
During periods of increased threat increase your disaster supplies to be adequate for up to two weeks.			X	

Appendix F.
Business Preparedness Surveys

	SCEPP	Des Moines	Memphis Shelby	Santa Monica	Loma Prieta	Bay Area Orgs
All Businesses						
<i>Hazard Knowledge</i>						
Knowledge of civil authorities plans/ procedures	x					
Awareness of state/federal assistance programs	x					
Has your company done an <u>inventory of hazardous buildings</u> ; that is, developed a list of all buildings that could be severely damaged by an earthquake?						x
Has [company name] <u>identified specific areas</u> that could be especially hazardous in the event of an earthquake- for example, areas that are prone to liquefaction, landslides, land subsidence, or fault rupture?						x
Had an engineer or other qualified person assess the earthquake safety of your building			x	x	x	
<i>Hazard Knowledge</i>						
Have you, as a spokesperson for your company, heard any of these things about how to get your company ready for the next damaging Bay Area earthquake? Please circle any that you recall <i>hearing about</i> .						x
Rearrange breakable items						x
Latch cabinet doors						x
Store hazardous materials safely						x
Add lips to shelves						x
Strap equipment						x
Brace walls						x
Bolt building to foundation						x
Stockpile water and food						x
Store emergency equipment						x
Develop emergency plan for employees						x
Learn how to rescue trapped people						x
Learn how to put out fires						x
Buy earthquake insurance						x
Learn how to provide first aid						x
Attended meetings or received written information on (<i>hazard type</i>) preparedness?		x	x	x	x	
Talked with those working in your business about what to do in the event of a (<i>hazard type</i>)?		x	x	x	x	
<i>Management, Direction and Co-Ordination</i>						
Obtained the support of top management to initiate an earthquake preparedness program	x					

Appendix F.
Business Preparedness Surveys

	SCEPP	Des Moines	Memphis Shelby	Santa Monica	Loma Prieta	Bay Area Orgs
Established a committee or committed staff to initiate an earthquake preparedness program or revise an existing plan	x					
Established emergency plant shut down procedures	x					
Conducted drills, exercises or workshops	x					x
Conducted any (<i>hazard type</i>) drills or exercises for your employees?		x	x	x	x	
Been involved in any (<i>hazard type</i>) preparedness or response training programs for your employees?		x	x	x	x	
Emergency financial procedures developed	x					
<i>Formal and Informal Response Plans and Agreements</i>						
Does your company have an emergency or disaster plan that specifically includes earthquake disaster response?						x
Developed a business emergency plan?		x	x	x	x	
Developed a business disaster recovery plan?		x	x	x	x	
Inter-industry mutual aid procedures developed	x					x
<i>Property Protection</i>						
Provided for protection of vital records	x					
Structural assessment						x
Structural rehabilitation						x
Nonstructural rehabilitation						x
Contents protection						x
Vacated						x
Moved facilities						x
Hazardous materials storage						x
Has your company undertaken a program to make its facilities more resistant to earthquake damage?						x
Have any other mitigation program been undertaken or considered by [company name]?						x
Taken action to brace shelves, equipment, or heavy objects that might move during an earthquake?			x	x	x	
<i>Supportive Resources</i>						
Warning and communication systems in place	x					
<i>Life Safety Protection</i>						
Evacuation procedures prepared/ tested	x					
Stored extra fuel or batteries?		x	x	x	x	

Appendix F.
Business Preparedness Surveys

	SCEPP	Des Moines	Memphis Shelby	Santa Monica	Loma Prieta	Bay Area Orgs
Learned first aid?		x	x	x	x	
Stored food or water			x	x	x	
Obtained a first aid kit or extra medical supplies?		x	x	x	x	
Has your company stockpiled emergency supplies for your own use in earthquake disasters; for example, having spare parts, office supplies, fuel and batteries, food and water stored?						x
Has anything else been done to prepare your company to response to an earthquake; for example, purchasing special equipment.						x
<i>Emergency Coping and Restoration of Key Functions</i>						
Made arrangements to move the business to another location in case of (<i>hazard type</i>) damage?		x	x	x	x	
Obtained an emergency generator for use if electrical power fails?		x	x	x	x	
Stored office supplies			x	x	x	
<i>Initiation of Recovery</i>						
Purchased (<i>hazard type</i>) insurance for your business?		x	x	x	x	x
Purchased business interruption insurance?		x	x	x	x	
Corporate Business						
<i>Management, Direction and Co-Ordination</i>						
Defined and assigned planning responsibilities or departments or divisions	x					
Documented administrative procedures to manage the planning process	x					
Defined and assigned planning responsibilities to departments or divisions	x					
Documented administrative procedures to manage the planning process	x					
Public information procedures developed	x					
Corporate training and test program developed	x					x
<i>Hazard Knowledge</i>						
Conducted an earthquake risk and vulnerability analysis	x					
Geologic site analysis completed	x					
Structural engineering analysis completed	x					
Nonstructural components analyzed	x					
Communications systems evaluated	x					
Developed an earthquake scenario	x					

Appendix F.
Business Preparedness Surveys

	SCEPP	Des Moines	Memphis Shelby	Santa Monica	Loma Prieta	Bay Area Orgs
Corporate emergency response resources inventoried	x					
<i>Formal and Informal Response Plans and Agreements</i>						
Plans completed and incorporated into overall corporate emergency plan	x					
<i>Property Protection</i>						
Alternative data processing facilities made available	x					
Developed coordination procedures for company facilities	x					
<i>Life Safety</i>						
Emergency medical aid available	x					
Employee welfare (work/home) programs in place	x					
<i>Supportive Resources</i>						
Community assistance programs developed	x					
<i>Initiation of Recovery</i>						
Liability and insurance programs developed	x					
Small Business						
<i>Hazard Knowledge</i>						
Initiated a risk assessment program to identify damage potential and hazards	x					
Reviewed security and safety policies	x					
<i>Life Safety Protection</i>						
Identified employee preparedness and response roles- encouraged home preparedness	x					
<i>Initiation of Recovery</i>						
Reassessed insurance policies and coverage	x					

Appendix G.
Business Preparedness Guidance and Checklists

	IBHS	ready.gov/ business	CDC	BENS	EMG
<i>Hazard Knowledge</i>					
Are you concerned that your normal business operations might be interrupted by a natural or human-caused disaster?	x				
Have you determined what parts of your business need to be operational as soon as possible following a disaster, and planned how to resume those operations?	x				
<i>Formal and Informal Response Plans and Agreements</i>					
Do you and your employees have a disaster response plan in place to help assure your safety and to take care of yourselves until help can arrive?	x				
Have you worked with your community, public officials, and other businesses to promote disaster preparedness and plan for community recovery?	x				
<i>Supportive Resources</i>					
Could you communicate with your employees if a disaster happened during work hours or after work hours?	x				
<i>Property Protection</i>					
Can your building withstand the impact of a natural disaster, and are your contents and inventory sufficiently protected so they will not be damaged?	x				
Are your vital records protected from the harm that could be caused by a disaster?	x				
<i>Emergency Coping and Restoration of Key Functions</i>					
Are you prepared to stay open for business if your suppliers cannot deliver, your markets are inaccessible, or basic needs (e.g. water, sewer, electricity, transportation) are unavailable?	x				
Do you have plans to stay open for business, even if you cannot stay in or reach your place of business?	x				
Have you consulted with an insurance professional to determine if your insurance coverage is adequate to help you get back in business following a disaster?	x				
Key documents:	x				
Employee contact list	x				
Key supplier/vendor information	x				
Key contacts - see list of persons that are considered key	x				
Critical business functions	x				
Recovery location	x				
Vital records	x				
Critical telephone numbers	x				
Supplies list and where to get them	x				
Key resources:	x				
Equipment/machinery/vehicles	x				
Computer equipment and software	x				

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	IBHS	ready.gov/ business	CDC	BENS	EMG
Voice/data communications	X				
Miscellaneous resources	X				
Disaster Supplies Checklist					
NOAA weather radio	X	X			
Working fire extinguisher and smoke detector	X	X			
First aid kit	X	X			
Flashlights and lightsticks	X	X			
AM/FM radio - battery operated or wind up	X	X			
Bottled water	X	X			
Non-perishable food and utensils	X	X			
Paper supplies (paper and pencil)	X	X			
Tools and other supplies	X	X			
Blankets	X	X			
Camera	X				
Cash/ATM and credit card	X	X			
Emergency contact list	X				
Whistle to signal for help		X			
Dust mask, plastic sheeting, duct tape		X			
Moist towlettes, garbage bags and plastic ties for personal sanitation		X			
Wrench or pliers to turn off utilities		X			
Can opener for food		X			
Local maps		X			
Prescription medications and glasses		X			
Infant formula and diapers		X			
Pet food and extra water for your pet		X			
Important family documents - insurance policies, identification, bank account records in a waterproof portable container		X			
Emergency reference materials such as a first aid book		X			
Complete change of clothing		X			
Household chlorine bleach and medicine dropper		X			
Matches in a waterproof container		X			
Feminine supplies and personal hygiene items		X			
Mess kits, paper cups, plates and plastic utensils, paper towels		X			
Books, games, puzzles, or other activities for children		X			
Hazard Specific Guidance and Checklists					
Earthquake					
<i>Hazard Knowledge</i>					
Assess your facility's vulnerability to earthquakes. Ask local government agencies for seismic information for your area					X
Have your facility inspected by a structural engineer. Develop and priorities strengthening measures.					X
Follow safety codes when constructing a facility or making major renovations					X

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	IBHS	ready.gov/ business	CDC	BENS	EMG
Inspect non-structural systems such as air conditioning, communications, and pollution control systems. Assess the potential for damage. Prioritize measures to prevent damages					X
Inspect your facility for any item that could fall, spill, break or move during an earthquake.					X
<i>Formal and Informal Response Plans and Agreements</i>					
Keep copies of design drawings of the facility to be used in assessing the facility's safety after an earthquake					X
Review processes for handling and storing hazardous materials. Have incompatible chemicals stored separately					X
Establish procedures to determine whether an evacuation is necessary after an earthquake.					X
Designate areas in the facility away from exterior walls and windows where occupants should gather after an earthquake if an evacuation is not necessary					X
<i>Life Safety Protection and Property Protection</i>					
Windows, skylights and doors with either tempered glass or safety film applied on the interior side of the glass, to reduce the chances of the glass shattering.	X				X
Natural gas lines with flexible connections and an automatic shut off valve.	X				
Flexible supply line to toilet(s).	X				
Flexible couplings on sprinkler systems.	X				
Major appliances, such as boilers, furnaces, and water heaters, braced to the wall and/or floor such that the appliance will not overturn or shift in the event of an earthquake.	X				
Hangers (usually strips of sheet metal or stiff steel rods) less than 12 inches long that support your mechanical and plumbing systems.	X				
Computer and other electronic equipment secured to the floor or desk with braces, Velcro, or some other means of attachment, so it will not overturn.	X				
Suspended ceilings braced to the structure to limit the amount of displacement during an earthquake.	X				
File cabinets with locks or latches that must be released manually in order to open the drawers.	X				
Cabinets, bookcases and storage racks secured to the walls and/or floor, to keep them from tipping over.	X				
<i>Management, Direction, and Co-Ordination</i>					
Conduct earthquake drills					X
<i>Initiation of Recovery</i>					
Ask your insurance carrier about earthquake insurance and mitigation techniques.	X				X

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	IBHS	ready.gov/ business	CDC	BENS	EMG
Fire					
<i>Hazard Knowledge</i>					
Meet with the fire department to talk about the community's fire response capabilities					X
Have your facility inspected for fire hazards. Ask about fire codes and regulations					X
Ask your insurance carrier to recommend fire prevention and protection measures					X
Determine the level of response your facility will take if a fire occurs.					X
<i>Management, Direction, and Co-Ordination</i>					
Distribute fire safety information to employees					X
Instruct personnel to use the stairs - not elevators - in a fire. Instruct them to crawl on their hands and knees when escaping a hot or smoke-filled area					X
Assign fire wardens for each area to monitor shutdown and evacuation procedures					X
Establish procedures for the safe handling and storage of flammable liquids and gases. Establish procedures to prevent the accumulation of combustible materials					X
Provide for the safe disposal of smoking materials					X
Conduct evacuation drills. Post maps of evacuation routes in prominent places. Keep evacuation routes clear.					X
Train employees in use of fire extinguishers					X
<i>Property Protection</i>					
Establish a preventive maintenance schedule to keep equipment operating safely					X
Place fire extinguishers in appropriate locations					X
Identify and mark all utility shutoffs					X
Consider installing a sprinkler systems, fire hoses, and fire-resistant walls and doors					X
Ensure that key personnel are familiar with all fire safety systems					X
<i>Supportive Resources</i>					
Install smoke detectors					X
Establish a system for warning personnel of a fire					X
Flood	X				X
<i>Hazard Knowledge</i>					
Find out whether your business is located in a Special Flood Hazard Area – V zone, Coastal A Zone or Non-Coastal A Zone. If so, what is the Base Flood Elevation (BFE) or Design Flood Elevation (DFE) at your location? Contact your local building or planning department for this information.	X				

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	IBHS	ready.gov/ business	CDC	BENS	EMG
Ask local emergency management office whether your facility is located in a flood plain. Learn the history of flooding in your area, learn the elevation of your facility in relation to streams, rivers, and dams					X
Inspect areas in your facility subject to flooding					X
Review the community's emergency plan and evacuation routes					X
Purchase a NOAA weather radio with a warning alarm tone and battery backup. Listen for flood watches and warnings					X
<i>Supportive Resources</i>					
Establish warning and evacuation procedures for the facility. Make plans for assisting employees who may need transportation					X
<i>Property Protection</i>					
Floodproof your facility					X
If you are in a Special Flood Hazard Area, ensure that electrical, plumbing and Heating/Ventilation/Air Conditioning (HVAC) equipment are installed above the flood elevation applicable at your location.	X				
If you are in a Coastal A Zone or V Zone, make sure that you have an open foundation (piles, piers, etc.) or breakaway wall system designed by a registered Professional Engineer for any portions of the building below the BFE. These features allow floodwaters to flow through.	X				
In an A Zone, either coastal or non-coastal, a minimum of two openings on multiple walls of each enclosed area.	X				
<i>Initiation of Recovery</i>					
Ask your insurance carrier for information about flood insurance.					X
Ask whether your community participates in the National Flood Insurance Program (NFIP).	X				
Freezing/Severe Winter Storms					
<i>Property Protection</i>					
A secondary moisture barrier that extends from the edge of the eaves to at least 24 inches beyond the inside of the exterior wall, if the roof is sloped.	X				
No attic or mechanical room with heat sources directly under the roof.	X				
Sealed and insulated recessed light fixtures that may be installed in the ceiling immediately below the attic space or mechanical room	X				
Attic penetrations properly sealed and insulated to prevent heat intrusion into the attic.	X				

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	IBHS	ready.gov/ business	CDC	BENS	EMG
Access doors to attic space or mechanical room properly insulated, sealed, weather-stripped or gasketed to prevent heat intrusion into the attic space or mechanical room.	x				
Insulation installed over water or sprinkler supply piping located in exterior walls, unheated drop ceilings, or other unheated spaces, to prevent frozen or burst pipes.	x				
<i>Management, Direction, and Co-Ordination</i>					
If space is unoccupied for more than 24 hours (e.g. holidays, vacation, weekends, etc.), there should be a plan in place to inspect the building once a day for freezing pipes during the winter months.	x				
Establish procedures for facility shutdown and early release of employees					x
Provide a backup power source for critical operations					x
Arrange for snow and ice removal from parking lots, walkways, loading docks, etc.					x
<i>Life Safety Protection</i>					
Store food, water, blankets, battery-powered radios with extra batters and other emergency supplies for employees who become stranded at the facility					x
Hurricane and High Winds	x				x
<i>Hazard Knowledge</i>					
Ask your local emergency management office about community evacuation plans					x
Survey your facility. Make plans to protect outside equipment and structures					x
Purchase a NOAA weather radio with a warning alarm tone and battery backup. Listen for hurricane watches and warnings					x
<i>Management, Direction, and Co-Ordination</i>					
Establish facility shutdown procedures. Establish warning and evacuation procedures. Make plans for assisting employees who may need transportation					x
Make plans for communicating with employees' families before and after a hurricane					x
<i>Life Safety Protection and Property Protection</i>					

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	IBHS	ready.gov/ business	CDC	BENS	EMG
Roof condition. A roof in good condition has all metal flashing secured to the structure and free of rust, preventing uplift and peeling off of roof coverings. Roof coverings are secure and show no signs of weather damage (cracking, rust, punctures, etc.). All vents and other roof penetrations are flashed and sealed, and all roof equipment is bolted down. The roof drainage system is working properly, with no "ponding" of water. There are no leaves or other debris blocking drainage.	x				
Roof-to-wall straps, brackets, or other connectors that attach each rafter or roof truss (whether wood or light frame steel) to the wall, to keep the roof from blowing off the building.	x				
Carports, canopies, and/or overhangs secured to the structure with rust-free anchors and tightened bolts/nuts.	x				
Signs, vent stacks, rooftop mechanical equipment and other vertical projections secured to the structure or the site foundation with rust-free anchors, tightened bolts/nuts, guy wires, or other secure methods – <i>do not use sheet metal screws alone.</i>	x				
Exterior windows and doors with a minimum design pressure rating of 50 pounds per square foot.	x				
Exterior doors with a deadbolt and supported by at least three hinges. In general, the more hinges your doors have, the more wind resistant they are. A deadbolt latching mechanism adds to wind resistance and security.	x				
Exterior double doors with head and foot bolts on the inactive door, or another method of securing the door, such as locking it into a mullion/center post.	x				
Impact-resistant windows and doors. Look for a sticker or label in the corner of the glass or frame itself, indicating it meets one or more of the following standards: ASTM E 1996 (9lb), SSTD 12, Dade County PA201, or FBC TAS201.	x				
An exterior lightning protection system. Look at your roof to see if there are metal rods or probes. The lightning protection system needs to be securely anchored to the roof. Otherwise it may whip around in a storm and damage the building.	x				
Surge protectors on all computer systems, telephone lines, and other electronic systems, to protect against lightning damage that often occurs in windstorms.	x				
Consider the need for backup systems					x
Prepare to move records, computers, and other items within your facility or to another location					x
Make plans to protect windows					x
Tornadoes					
<i>Hazard Knowledge</i>					

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	IBHS	ready.gov/ business	CDC	BENS	EMG
Ask your local emergency management office about the community's tornado warning system					x
Work with a structural engineer or architect to designate shelter areas in your facility.					x
Consider the amount of space you will need for shelter in your facility					x
Purchase a NOAA weather radio with a warning alarm tone and battery backup. Listen for tornado watches and warnings.					x
<i>Management, Direction, and Co-Ordination</i>					
Establish procedures to inform personnel when tornado warnings are posted.					x
Make plans for evacuating personnel away from lightweight modular offices or mobile home size buildings					x
Conduct tornado drills					x
Wildfire					
<i>Property Protection</i>					
Create "survivable" space around the building. This is space that is cleared of brush and other fuel sources and maintained so that a wildfire will not spread to the structure. The survivable space recommendations are: 30 feet in low-risk fire areas, 50 feet in moderate-risk areas and 100 feet in high-risk areas. Survivable space should be increased on any side where there is a downward slope away from the building, and if the exterior of the building is combustible.	x				
Roofing materials with a UL 790 Class A, ASTM E108 Class A, or UBC 15-2 fire rating. (x				
Eaves enclosed with fire resistant materials and screens over soffit vents.	x				
Attic, crawlspace and/or foundation exterior vents of non-combustible materials (e.g. aluminum, other metals, or plywood 1/2" or more thick).					
Exterior walls covered with a non-combustible siding/veneer	x				
Pane tempered glazing or other windows tested in accordance with ASTM E119.	x				
Underside of above-ground decks and balconies enclosed with fire resistant materials.	x				
<i>Life Safety Protection</i>					
A monitored smoke alarm system, to automatically alert the local fire department if fire breaks out.	x				
A fire sprinkler system, to automatically start fire suppression.	x				

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	IBHS	ready.gov/ business	CDC	BENS	EMG
Address numbers that are non-combustible, at least 4 inches, reflectorized, on contrasting background, and visible from the road from both directions of travel.	x				
Access route with a minimum width of 12 feet with at least 13.5 feet of vertical clearance near the structure.	x				
Hazardous Materials Incidents					
<i>Hazard Knowledge</i>					
Identify and label all hazardous materials stored, handled, produced, and disposed of by your facility.					x
Ask the local fire department for assistance in developing appropriate response procedures					x
<i>Management, Direction, and Co-Ordination</i>					
Establish a hazardous materials response plan					x
Train employees to recognize and report hazardous material spills and releases.					x
Technological Emergencies					
<i>Hazard Knowledge</i>					
Identify all critical operations - utilities, electrical systems, manufacturing equipment, communication systems, transportation systems					x
Determine the impact of service disruption					x
Ensure that key safety and maintenance personnel are thoroughly familiar with all building systems					x
<i>Property Protection</i>					
Establish preventive maintenance schedules for all systems and equipment.					x
<i>Emergency Coping and Restoration of Key Functions</i>					
Establish procedures for restoring systems. Determine need for backup					x
Pandemic Influenza					
<i>Hazard Knowledge</i>					
Determine potential impact of a pandemic on company business financials using multiple possible scenarios that affect different product lines and/or production sites			x		
Determine potential impact of a pandemic on business-related domestic and international travel (e.g. quarantines, border closures)			x		
<i>Program Management, Direction, and Co-Ordination</i>					
Identify a pandemic coordinator and/or team with defined roles and responsibilities for preparedness and response planning			x		

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	IBHS	ready.gov/ business	CDC	BENS	EMG
Identify essential employees and other critical inputs (e.g. raw materials, suppliers, sub-contractor services/products, and logistics) required to maintain business operations by location and function during a pandemic			x		
Develop and plan for scenarios likely to result in an increase or decrease in demand for your products and/or services during a pandemic (e.g. effect of restriction on mass gatherings, need for hygiene supplies)			x		
Implement guidelines to modify the frequency and type of face-to-face contact among employees and between employees and customers.			x		
Forecast and allow for employee absences during a pandemic due to factors such as personal illness, family member illness, community containment measures and quarantines, school and/or business closures, and public transportation closures.			x		
Establish an emergency communications plan and revise periodically.			x		
Develop platforms for communicating pandemic status and actions to employees, vendors, suppliers, and customers inside and outside the worksite in a consistent and timely way, including redundancies in the emergency contact system			x		
Evaluate employee access to and availability of healthcare services during a pandemic, and improve services as needed.			x		
Evaluate employee access to and availability of mental health and social services during a pandemic, including corporate, community, and faith-based resources, and improve services as needed.			x		
Identify employees and key customers with special needs, and incorporate the requirements of such persons into your preparedness plan.			x		
Establish policies for flexible worksite and flexible work hours			x		
Establish policies for preventing influenza spread at the worksite			x		
Establish policies for employees who have been exposed to pandemic influenza, are suspected to be ill, or become ill at the worksite			x		
Establish policies for restricting travel to affected geographic areas, evacuating employees working in or near an affected area when an outbreak begins, and guidance for employees returning from affected areas			x		
Set up authorities, triggers, and procedures for activating and terminating the company's response plan, altering business operations, and transferring business knowledge to key employees			x		

Appendix G.
Business Preparedness Guidance and Checklists

	IBHS	ready.gov/ business	CDC	BENS	EMG
Provide sufficient and accessible infection control supplies in all business locations			x		
Ensure availability of medical consultation and advice for emergency response			x		
Anticipate employee fear and anxiety, rumors and misinformation and plan communications accordingly			x		
Implement an exercise/drill to test your plan, and revise periodically			x		
Develop and disseminate programs and materials covering pandemic fundamentals, personal and family protection and response strategies			x		
Establish policies for employee compensation and sick-leave absences unique to a pandemic including policies on when a previously ill person is no longer infectious and can return to work after illness			x		
<i>Formal and Informal Response Plans and Agreements</i>					
Find up-to-date, reliable pandemic information from community public health, emergency management and other sources and make sustainable links.			x		
<i>Supportive Resources</i>					
Enhance communications and information technology infrastructures as needed to support employee telecommuting and remote customer access			x		
Ensure that communications are culturally and linguistically appropriate			x		
Disseminate information to employees about your pandemic preparedness and response plan			x		
Provide information for the at-home care of ill employees and family members			x		
Train and prepare ancillary workforce (e.g. contractors, employees in other job titles/descriptions, retirees)			x		
Identify community sources for timely and accurate pandemic information and resources for obtaining counter-measures			x		
Collaborate with insurers, health plans and major local healthcare facilities to share your pandemic plans and understand their capabilities and plans			x		
Collaborate with federal, state, and local public health agencies and/or emergency responders to participate in their planning processes, share your pandemic plans, and understand their capabilities and plans			x		
Communicate with local and/or state public health agencies and/or emergency responders about the assets and/or services your business could contribute to the community			x		

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	IBHS	ready.gov/ business	CDC	BENS	EMG
Share best practices with other businesses in your communities, chambers of commerce, and associations to improve community response efforts.			x		
<i>Life Safety Protection</i>					
Encourage and track annual influenza vaccination for employees			x		
Terrorist and Bioterrorist Attacks					
<i>Hazard Knowledge</i>					
How would the business continue if the workplace or storage facilities were destroyed or access to these facilities restricted for days, weeks, months?				x	
What would be the financial impact on the business entity if there were a delay in delivering goods or services to clients?				x	
<i>Management, Direction, and Co-Ordination</i>					
Designate a communications team.				x	
Who will be the primary contact with the local and state public health and public safety agencies?				x	
What and how will you communicate with your employees?				x	
What and how will you communicate with the families of the employees?				x	
What and how will you communicate with your clients?				x	
What and how will you communicate with your vendors?				x	
What and how will you communicate with the media?				x	
<i>Property Protection</i>					
Is the outside of the building or workplace and parking lot adequately lighted?				x	
Are there unusual cars in parking lot?				x	
Is landscaping around building neat and well kept?				x	
Is the workplace locked when appropriate?				x	
Does the work facility have a security system?				x	
Does the company have an adequate method of identifying all who work in or visit the facility?				x	
Is access restricted in critical or sensitive areas?				x	
Is access limited to only current employees and visitors?				x	
Have employees been trained and encouraged to be alert and look for unusual packages, cars, and other factors that might be a sign of a suspicious event?				x	
Are necessary and critical paper and electronic files frequently backed up?				x	

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Business Preparedness Guidance and Checklists

	IBHS	ready.gov/ business	CDC	BENS	EMG
<i>Life Safety Protection</i>					
Have personnel responsible for handling mail been briefed on what to look for and what to do with suspicious packages?				x	
Are employees trained and encouraged to be on the lookout for suspicious packages or activities in the workplace?				x	
In the event of an emergency evacuation of the workplace, is a procedure established where employees are to meet and take stock of the situation?				x	
<i>Emergency Coping and Restoration of Key Functions</i>					
Does the company, and all its various units, have adequate Business Interruption insurance?				x	
Where would critical employees work and how would business processes continue if tomorrow you could not re-enter the workplace for any reason?				x	
Would or could the company continue to provide deliverables, products, or services to clients in the event of a terrorist attack?				x	

Appendix H.
Public Sector Preparedness Surveys

	SCEPP	Bay Area Surveys
City/County Level Questions	x	
<i>Hazard Knowledge</i>		
Identified political and economic constraints which may impede or restrict the scope of the planning effort	x	
Performed a city/county-wide earthquake hazard assessment and resource vulnerability analysis	x	
Has your company undertaken or considered undertaking a structural assessment?		x
Has your [city/county] done an <u>inventory of hazardous buildings</u> ; that is, developed a list of all buildings that could be severely damaged by an earthquake?		x
Has this [city/county] <u>identified and mapped specific areas of</u> [city/county] that could be especially hazardous in the event of an earthquake- for example, areas that are prone to liquefaction, landslides, land subsidence, or fault rupture?		x
<i>Management, Direction, and Co-Ordination</i>		
Obtained enabling resolution from city/county board of supervisors	x	
Appointed a city/county planning coordination group (or utilized an existing committee)	x	
Formed planning committee-structure	x	
Established key planning assumptions	x	
Established the objectives of the planning effort	x	
Prepared a city/county planning strategy and timeline	x	
Established a new plan format or updated an existing plan	x	
Prepared briefings and made planning committee assignments	x	
Does your [agency/department/ office] have an <u>emergency or disaster plan</u> that specifically includes earthquake disaster response?		x
Has your [agency/department/ office] carried out or participated in any <u>earthquake drills or exercises</u> for your own personnel?		x
Has your [agency/department/ office] conducted or been involved in any earthquake preparedness or response <u>training programs</u> for your own personnel?		x
<i>Formal and Informal Response Plans and Agreements</i>		
Have you discussed or do you plan to discuss mutual emergency aid with any of the following? (circle all that apply):	x	
Other neighboring counties/cities/cities within the county	x	
Corporations	x	
Major industry in your area	x	
State agencies	x	
Federal agencies	x	

Appendix H.
Public Sector Preparedness Surveys

	SCEPP	Bay Area Surveys
Has your [agency/department] established arrangements with other agencies, organizations, or communities for <u>mutual aid</u> and support during disasters; for example, to share personnel, facilities, equipment?		x
<i>Life Safety Protection</i>		
Has your [agency/department/ office] <u>stockpiled emergency supplies</u> for your own use in earthquake disasters; for example, having spare parts, office supplies, fuel and batteries, food and water?		x
Please tell me what supplies you've stockpiled and why.		x
Has <u>anything else</u> been done to prepare your [agency/department/ office] to respond to an earthquake; for example, purchasing special equipment?		x
<i>Property Protection</i>		
Here is a checklist of actions that could have been taken by your [agency/ department/ office]. Has your company undertaken or considered undertaking any of these activities?		x
Structural rehabilitation		x
Non structural rehabilitation		x
Contents protection		x
Vacated		x
Moved facilities		x
Hazmat storage		x
Has [city/county] undertaken a program to make <u>governmental facilities</u> – for example, fire stations, police stations, emergency operations centers, administrative offices, -- <u>more resistant to earthquake damage</u> ?		x
How would you rate your company on its <u>ability to prevent losses and damages</u> from a high intensity, damaging earthquake?		x
How would you rate your company's <u>ability to respond</u> to a high intensity, damaging earthquake?		x
<i>Initiation of Recovery</i>		
Has your agency/department/office/company undertaken or considered undertaking any of these activities?		x
Earthquake insurance		x
How would you rate your city/county's <u>ability to recover</u> from a high intensity, damaging earthquake		x

Appendix I.
Public Sector Preparedness Guidance

CAR Emergency Management Functions	Emergency Management Accreditation Program	The Infrastructure Security Partnership (TISP)	JCAHO - Standing Together: An Emergency Planning Guide for America's Communities	DHS Target Capabilities List
	Program Management		Identify and Establish the Emergency Management Preparedness and Response Team	
Laws and Authorities	Laws and Authorities	Roles and Responsibilities		
Hazard Identification and Risk Assessment	Hazard Identification, Risk Assessment and Impact Analysis	Awareness and Understanding of Interdependencies	Determine the Risks and Hazards the Community Faces	Risk Management; Information gathering and recognition of indicators and warnings; intelligence analysis and production; intelligence/information sharing and dissemination; law enforcement investigation and operations; CBRNE detection
		Risk Assessment and Mitigation	Determine Current Capacities and Capabilities	Critical infrastructure protection; food and agriculture safety and defense; epidemiological surveillance and investigation; public health laboratory testing
		Awareness and Understanding of Interdependencies	Define the Community	
Hazard Mitigation	Hazard Mitigation	Resilient and Interoperable Communications and Information Systems	Set Goals for Preparedness and Response Planning	
	Resource Aid			
	Mutual Aid			
Planning	Planning	Response Challenges	Develop the Integrated Plan	Planning
Direction, Control, and Coordination	Direction, Control, and Coordination	Roles and Responsibilities		Onsite Incident Management; emergency operations center management
Communications and Warning	Communications and Warning	Resilient and Interoperable Communications and Information Systems	Ensure Thorough Communication Planning	Emergency Public Information and Warning

Appendix I.
Public Sector Preparedness Guidance

CAR Emergency Management Functions	Emergency Management Accreditation Program	The Infrastructure Security Partnership (TISP)	JCAHO - Standing Together: An Emergency Planning Guide for America's Communities	DHS Target Capabilities List
				Responder safety and health; public safety and security response; animal health emergency support; environmental health; explosive device response operations; WMD/hazardous materials response and decontamination; citizen protection; isolation and quarantine; urban search and rescue; triage and pre-hospital treatment; medical surge; mass care
Operations and Procedures	Operations and Procedures	Business Continuity and Continuity of Operations	Ensure Thorough Mental Health Planning	
			Ensure Thorough Planning Related to Vulnerable Populations	
		Recovery and Restoration		Structural damage and mitigation assessment; restoration of lifelines; economic and community recovery; fatality management
Logistics and Facilities	Logistics and Facilities	Logistics and Supply Chain Management		Critical resource logistics and distribution; medical supplies management and distribution
Training	Training	Appreciation of Cyber Threats and Incidents		
Exercises, Evaluations, and Corrective Actions	Exercises, Evaluations, and Corrective Action	Exercises, Training, and Education	Train, Exercise, and Drill Collaboratively	
			Critique and Improve the Integrated Community Plan	
Crisis Communications, Public Education, and Information	Crisis Communications, Public Education and Information	Cooperation and Coordination	Sustain Collaboration, Communication, and Coordination	Community Preparedness and Participation; volunteer management and donations

Appendix I.
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CAR Emergency Management Functions	Emergency Management Accreditation Program	The Infrastructure Security Partnership (TISP)	JCAHO - Standing Together: An Emergency Planning Guide for America's Communities	DHS Target Capabilities List
		Public Information/Risk Communication		Communications
Finance and Administration	Finance and Administration		Identify, Cultivate and Sustain Funding Sources	

Appendix J Survey Instrument Descriptions

In assessing surveys on preparedness practices, we used two major archives containing preparedness assessment surveys. The first archive, which was assembled by the UCLA Center for Public Health and Disasters, focuses on public preparedness for earthquakes in California; a second archival source included surveys that were conducted by the Disaster Research Center at the University of Delaware and that focused on businesses and disasters. In total we reviewed and compared items for 14 different surveys from these two sources. Summaries of individual survey items are found below.

Reeder, Leo. 1971. Los Angeles Metropolitan Area Studies, No. 3 -- Earthquake Project. Telephone survey of Los Angeles Metropolitan area residents' experiences and responses to the Sylmar earthquake of 1971.

Turner, Ralph H. 1977. Earthquake Watch in California, 1977-1979 --Baseline Interview, January 1977.

Turner, Ralph H. 1979. Earthquake Watch in California, 1977-1979 --Wave I Re-interview of Baseline Sample. Telephone survey of California residents' experiences with earthquakes, beliefs about the earthquake threat, and preparedness for earthquakes.

Goltz, Jim. 1985. Southern California Earthquake Preparedness Project (CSEPP). Questionnaire mailed to organizational respondents to assess preparedness efforts in response to the receipt of Earthquake Planning Guidance sent by the State of California and the Southern California Earthquake Preparedness Project. Questions focused on how the guidance had or had not been implemented in organizations of various types and sizes.

Bourque, Linda B. 1988. Community Response to the October 1, 1987 Whittier Narrows Earthquake. Telephone survey of Los Angeles County residents' experiences in and responses to the Whittier Narrows earthquake, one year post-event. Objectives were to find out about L.A. county residents' experiences after the earthquake; where they were, how they reacted, where they obtained information, whether their property was damaged, etc. This study allows for comparisons of L.A. residents' earthquake-related knowledge, experience, and behaviors in 1988 with studies conducted by Leo Reeder and Linda Bourque following the Sylmar earthquake in 1971 and Ralph Turner in 1977 and 1979

Mileti, Dennis. 1989. Parkfield Earthquake Prediction, Study on Public Response to the Parkfield Earthquake Prediction.

Mailed questionnaire sent to residents in the California cities of Coalinga, Paso Robles, and Taft. Objectives were to find out about the information received about the Parkfield earthquake prediction including the suggested advice for preparedness, who the information came from, and beliefs regarding earthquakes and earthquake predictions.

Disaster Research Center. 1989. *Businesses and Disasters: Impacts and Recovery Following the 1989 Loma Prieta Earthquake.*

Mail questionnaire distributed to businesses that were operating in Santa Cruz County at the time of the 1989 Loma Prieta earthquake. Questions included sections on damage and disruption resulting from the earthquake, recovery assistance following the earthquake, changes in business since the earthquake, and disaster preparedness activities.

Bourque, Linda B. 1990. *Community Response to the October 17, 1989 Bay Area (Loma Prieta) Earthquake.*

Telephone survey of San Francisco Bay Area residents' experiences and responses to the Loma Prieta earthquake of October 17, 1989. Respondents comprised adult residents of Alameda, Santa Clara, Santa Cruz, San Mateo, and San Francisco Counties. Study objectives were similar to the 1987 Whittier Narrows earthquake study.

Mileti, Dennis. 1990. *Loma Prieta Earthquake Citizen Survey.*

Mailed questionnaire sent to residents in the California cities of Santa Cruz and San Francisco. Objectives were to find out about residents' experiences of the earthquake, preparedness activities, experiences post-earthquake including information received concerning aftershocks and the protective actions taken in response to warning information.

Mileti, Dennis. 1992. *Bay Area Project Citizen Survey, 1992.*

Study on public information about earthquakes and whether or not people have done anything to prepare for another earthquake in the Bay Area. Questionnaires were mailed to San Francisco residents and focused on beliefs about earthquakes and other hazards, information received about a possible earthquake in the Bay Area, reducing losses, and how to prepare, as well as reactions to a public information campaign on earthquake hazards in the Bay Area.

Mileti, Dennis. 1992. *Bay Area Project Organization Survey.*

Face to face interviews were conducted with businesses and community organizations in the Bay Area. They focused on organizational concern, role, and responsibility for earthquake preparedness, response, and recovery in the Bay Area. The concept of preparedness included questions about planning, resources and mutual aid, drills and training, and supplies. Other questions included organizational experience, communications (including information sent and received and channels of communication), mitigation activities, regional networking, damage reduction, and hazard vulnerabilities.

Disaster Research Center. 1993. *Des Moines Business Study: Impacts of the 1993 Floods.*

Mailed questionnaire sent to businesses operating during the flooding in Des Moines in 1993. Questions included a focus on critical services for business continuity, business closure, sources of assistance following the floods, and preparedness activities.

Disaster Research Center. 1994. Santa Monica Business Study: Impacts of the 1994 Northridge Earthquake.

Mailed questionnaire sent to business in the cities of Los Angeles and Santa Monica operating during the Northridge earthquake to assess how businesses were affected by the 1994 earthquake. Questions included a focus on interruption of lifeline services, business closure, business relocation, recovery assistance following the earthquake, and preparedness activities.

Bourque, Linda B. 1994. Community Response to the January 17, 1994 Northridge Earthquake.

Telephone survey utilizing Computer Assisted Telephone Interviewing (CATI) to identify and assess Southern California residents' experiences in and responses to the Northridge earthquake of January 17, 1994. Respondents comprised residents of Los Angeles County and Southeastern Ventura County. Study objectives were similar to the Whittier Narrows earthquake and the Loma Prieta earthquake. (Many of the items in the questionnaires developed by Bourque in the 1988, 1990, and 1994 surveys were identical or extremely similar. Many of those items were adapted from the Los Angeles Metropolitan Area Survey conducted after the 1971 Sylmar earthquake or by Turner in 1977 and the re-interview in 1979.)

Disaster Research Center. No Date. Memphis-Shelby County Business Earthquake Preparedness Survey.

Mailed questionnaire sent to a sample of Memphis-Shelby County businesses focusing on business earthquake preparedness and on how a damaging earthquake might affect business operations. The questionnaire includes questions on earthquake risk, need for utility services, and preparedness activities.